# **CRUDE OIL**

### **Reserves and Production**

In 2006 Indonesia ranked twenty-first among world oil producers, with approximately 1.3% of the world's daily production. The GOI places Indonesia's proven oil reserves at approximately 4.44 billion barrels, according to official data. These figures are 13% lower than in 2000. Oil exports were \$10.9 billion in 2006, up from \$10.04 billion in 2005. Total oil and gas exports (including LNG) were \$21.41 billion in 2006, compared with \$19.2 billion in 2005, and represented 22% of Indonesia's export earnings, down from 23% in 2005.

In 2006 Indonesia produced an average 1,005,700 barrels per day (bpd) of petroleum crude and condensate, according to government figures. Production fell to 912,000 bpd in 2007, according to unofficial government data. Indonesia's production of crude oil and condensate continues its multi-year trend of gradual decline from 1.062 million bpd in 2005, 1.09 million bpd in 2004, 1.15 million bpd in 2003, and 1.25 million bpd in 2002. Indonesia has produced well below its OPEC crude production quota of 1.451 million bpd (without condensate), as a result of declining investment and maturing oil fields.

In 2006 Indonesia's 1,005,700 bpd of daily production consisted of 883,200 bpd of crude and 122,500 bpd of condensate. This was a 29 percent drop from 2000. Almost all oil producers reported flat or declining output in 2006. Pertamina was an exception, increasing output from 50,700 bpd in 2005 to 94,300 bpd in 2006, an increase of 46%. Continued sluggish investment and a decrease in new

exploration were key factors behind the decline. PT Chevron Pacific Indonesia's production, which accounted for 48.3% of the country's crude oil production in 2006, declined 7.5% from 525,200 bpd in 2005 to 485,800 bpd in 2006. Pertamina passed Total Indonesia to become the second largest oil producer in 2006 with 9.4% of production.

In 2006 the GOI renewed its commitment to increase output in its energy blueprint and set a production target of 1.3 million bpd by 2009. In May 2008 Vice President Jusuf Kalla revised the target to 1.2 million bpd by 2010. Production increased in 2008, but few industry observers believe Indonesia can achieve those production goals without significant changes to the system of incentives and regulations for production sharing contractors.

Table: Crude and Condensate Production by major producers (1,000 bpd)

Company	2005	2006	Change (%)
Chevron (Caltex)	471.4	446.8	-5%
Chevron (Unocal)	53.8	39.0	-27%
Pertamina	50.7	94.3	86%
Total	88.0	90.9	3%
ConocoPhillips	73.0	64.1	-12%
CNOOC	65.4	57.0	-13%
Medco(Exspan)	54.2	45.2	-17%
Petrochina	42.4	43.6	3%
BP	24.8	26.6	8%
BumiSiakPusako	27.3	25.7	-6%
Others	111.2	72.5	-35%
Total	1,062.1	1,005.6	-5%

# **Imports**

Indonesia remains a significant importer of crude oil. Indonesia's crude oil imports dropped sharply in 2006 to 116.2 million barrels from 148.5 million in 2004. Saudi Arabia, Brunei, and Nigeria are the major suppliers. Fuel product imports dropped to 133.4 million barrels in 2006, down from 165.7 million barrels in 2005 and 154.4 million barrels in 2004. In term of value, oil imports in 2006 increased 5% to \$17.96 million, compared with \$17.08 million in 2005.

# **Exploration and Investment**

Of an estimated 60 oil basins, approximately 22 have been extensively explored. Most oil exploration is currently being carried out in the basins of Western Indonesia under PSCs. The bulk of Indonesia's oil reserves are located onshore and offshore in Central Sumatra

and
Kalimantan.
The GOI has
placed
increased
emphasis on
developing
oil reserves
in remote
locations,
such as
Papua,
where

Oil and Gas Investments 2000-2006 9.000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 2000 2001 2004 2006 2002 2003 2005

exploration activities to look for new reserves. With no significant oil discoveries in western Indonesia in the last 10 years, the government hopes eastern Indonesia's frontier and deep-sea areas may contain sizable oil reserves.

The number of exploration drilling wells completed in 2006 dropped sharply to 35, compared with 68 in 2005. In 1998, explorers drilled 145 wells. The success ratio (successful wells versus wells drilled) reached 45.7% in 2006, up slightly from 43.8% percent in 2005.

### Seismic Activities

According to MIGAS, a total of 14,962 kilometers of combined 2-D and 3-D seismic activities were carried out in 2006, continuing the steady downward trend since the 1997 peak of 469,198 kilometers.

# Exploration Blocks Awarded

The government awarded 9 oil and gas exploration blocks in 2007, 27 blocks in 2006, 9 in 2005, 16 in 2004 and 15 in 2003.

proven and potential reserves are estimated at 109.1 million barrels.

The oil and gas industry today faces several crucial problems, particularly in the upstream sector, due to aging oil and gas assets and investment climate uncertainties. Officials hope oil contractors will aggressively increase

The direct bidding round is one of the Government's revamped procedures for exploration and production contracts in a bid to increase their attractiveness.

Previously, oil and gas companies could only receive a concession through an official tender. Now, the government accepts proposals for blocks without waiting for a formal bidding session. Under this special bidding process, after a company applies to acquire a new exploration block, the government invites other bidders to participate. If no other bidder emerges within a set timeframe, the government grants the block to the sole bidder.

The government also offered new, more attractive terms and conditions for new exploration blocks in 2005. Winning PSCs would get between 20 and 35 percent splits for oil and between 30 and 40 percent for gas. Under previous PSC terms, companies generally receive a 15 percent split for oil and 30 percent split for gas. The government also set first tranche petroleum (FTP) obligations at 10 percent.

Indonesia's production continues to decline due to lack of investment and aging fields. At the same time, several political leaders throughout 2007 and 2008 have voiced concern regarding the escalating share of expenditures related to reimbursing contractors for their costs of exploration and production as stipulated in their PSCs. The Ministry of Energy and Mineral Resources enacted a negative list of cost recovery in June 2008, prohibiting many costs that had previously been allowed.

BP Migas chairman R. Priyono said in May 2008 that he will seek to link increases in cost recovery with increased production. A 2008 report by BPMigas said the government paid \$8.33 billion to oil and gas producers in 2007 for recovery costs, a rise of 6.4%. In 2006 and 2005, the government paid \$7.8 billion and \$7.3 billion, respectively. Industry analysts say rising recovery costs are driven by

increased competition for equipment and qualified personnel due to record petroleum prices, the significantly higher costs of maintaining production from aging wells, and new exploration and production in deepwater and remote locations.

### **Mergers and Acquisitions**

U.S.-based Chevron acquired Unocal in August 2005, strengthening its position as Indonesia's largest oil producer. Caltex and Unocal both assumed the Chevron name but continue to conduct operational activities under separate subsidiaries.

In August 2004, Indonesia's largest oil and gas company, Medco Energi International completed acquisition of Novus Petroleum Limited, a company listed in the Australian Stock Exchange with assets in the Middle East, United States, Australia and Indonesia. The acquisition led to the change of Novus' directors as it cut its global assets.

### Mergers

- Chevron and Unocal, Aug 2005.
- Conoco & Phillips ConocoPhillips, Sept 2002.
- Chevron & Texaco ChevronTexaco, Sept 2001
- Santa Fe Snyder & Devon Devon Energy Corp, Aug 2000.
- BP Amoco & Arco BP, Apr 2000.
- TotalFina & Elf TotalFinaElf Sam, Feb 2000.
- Exxon & Mobil ExxonMobil Corp, Nov 1999.
- El Paso & Sonat El Paso Energy Corp, Oct 1999.
- Total & Fina TotalFina, Jun 1999.
- Lasmo & Monument Lasmo Plc, Jun 1999.
- Santa Fe & Snyder Santa Fe Snyder Corp, May 1999.

- Nisseki & Mitsubishi Oil Co. Nisseki Mitsubishi Abushild, Apr 1999.
- Kerr McGee & Oryx Kerr McGee Corp, Feb 1999.
- BP & Amoco BP Amoco Plc, Jan 1999.
- British Borneo & Hardy British Borneo
   Oil & Gas Plc, Oct 1998.
- Ocean Energy & Seagull Ocean Energy Inc, Jun 1997.

#### **Takeovers**

- Medco Energi Novus Petroleum, August 2004
- Conoco Gulf Indonesia Resources, July 2002
- CNOOC YPFMaxus, Jan 2002.
- PetroChina Devon Energy, April 2002
- Husky Oil Ltd. Renaissance energy, Aug 2000.
- Canadian Natural Resources Ranger Oil, July 2000.
- Fortune (Indo Pacific) GFB Resources (Java) Ltd, Jul 2000.
- Agip British Borneo, May 2000.
- Singapore Petroleum Company Ltd LL&E Indonesia, Jan 2000.
- Maple/Matrix GFB Resources (Langsa) Ltd, Jan 2000.

## The Future

Pundits had forecast Indonesia's imminent shift from net oil exporter to net importer for several years. Those predictions finally were realized on a monthly basis in 2004. A steady decline in production, coupled with lower exploration investment levels, accelerated the transition to net importer earlier than forecasters has predicted. However, with substantial reserves of natural gas and coal, Indonesia remains a net energy exporter.

The March 2006 agreement between ExxonMobil and Pertamina to begin

development of the Cepu bloc and the drop in domestic petroleum consumption following the 2005 and 2008 price hikes might be a step toward bringing Indonesia back into the net exporter camp, although more production is necessary. To maintain momentum, industry observers encouraged the GOI to implement legislation and policies to rationalize the use of Indonesia's energy resources. The government, however, has not made any fundamental changes to the subsidized fuel regime, despite the price hikes.

A 2005 industry survey conducted by the IPA and PriceWaterhouseCoopers concluded that Indonesia's oil and gas industry is at a critical juncture. Survey participants lauded positive government efforts toward improving the investment climate in the upstream industry, such as improved fiscal incentives, the development of an overall energy blueprint, and an improving gas pipeline infrastructure.

Industry representatives said, however, that Indonesia should improve its fiscal terms for oil and gas production for both mature and frontier areas. Often the balance between risk and reward is generally viewed as insufficient to attract major exploration funds. These problems are exacerbated by small reserve accumulations and high infrastructure costs. To address these concerns, the Minister of Energy and Mineral Resources issued Regulation 8/2005 in April 2005, which gave contractors developing marginal oil field an additional 20% reimbursement in cost recovery. In its 2005 bidding round the government offered also a more favorable contractor production split of up to 70/30 (government/contractor) and up to 60/40 for oil and gas respectively.

As part of its Energy Blueprint in January 2006, Indonesia renewed its intention to achieve a production target of 1.3 million bpd by 2009. Industry leaders say that five actions by the GOI are crucial to reach this production target in the medium term:

- Harmonizing conflicting laws and regulations, including the timely implementation of regulations;
- Improving teamwork, coordination and cooperation among GOI entities;
- Implementing judicial reform;
- Changing the regulatory paradigm to a "shared economic interest" model;
- Having more predictability in allowed cost recovery; and
- Protecting contract sanctity.

# **PSC Update**

#### Chevron

Chevron Indonesia operations include former Caltex Pacific Indonesia (CPI) and Unocal assets which were consolidated after the merger of Chevron and Unocal in 2005. Chevron's operations in Indonesia are geographically dispersed and include onshore exploration & production and self-use power generation in Sumatra, offshore production in Kalimantan, and geothermal and power operations in Java. In addition to these operations, Chevron holds a 25% non-operating interest in the South Natuna Sea Block B, operated by ConocoPhillips, and interests in several other exploration blocks.

Chevron produces nearly half of Indonesia's crude oil production; in 2007, Chevron achieved a gross average daily oil-equivalent production of over 585,000 barrels of petroleum and condensate, a 20% increase compared with 485,800 bpd in the prior year. However, oil production

averaged 470 MBOEPD equaling approx 172 MM barrels on an annual basis while gas averaged 336 MCFPD equaling approx 123 BSCF on an annual basis.

The majority of the firm's oil production came from the Duri and Minas fields in the Rokan PSC (Production Sharing Contract) located in central Sumatra. Daily gross production from all of Sumatra operations are approximately 90 producing fields, averaged 425,000 barrels of crude oil and 54 million cubic feet of natural gas in 2007.

Chevron's offshore operations are located in East Kalimantan with production from both shelf and deepwater assets. During 2007, daily gross production from Kalimantan Operations' two producing PSCs (East Kalimantan and Makassar) averaged 34,000 barrels of oil and condensate and 192 million cubic feet of gas. In addition, Chevron continues to advance the development of its deepwater natural gas projects and has submitted the final Plan of Development to the Government of Indonesia for the projects located in Kalimantan's Kutei Basin.

Chevron's downstream activities include sales of paraxylene, benzene and fuel catalysts to refineries in Java, and the company enjoys a sizable domestic market share of lubricants and fuel additives.

In the electric power business, Chevron renamed Amoseas as Chevron Geothermal Indonesia in 2004. The 110 MW Darajat III project achieved commercial operation in July 2007. From the Unocal merger, Chevron acquired another geothermal facility in Gunung Salak, Central Java. In addition, the company also operates a 300 MW co-

generation facility in North Duri to support its Central Sumatra activities. Chevron says it is evaluating further expansion of its Darajat and Salak fields and is seeking opportunities to explore and develop new geothermal fields in Indonesia.

#### **ExxonMobil**

ExxonMobilwas created from the merger of Exxon and Mobil in November 1999, leading to the consolidation of Exxon, Esso, and Mobil operations in Indonesia. ExxonMobil (EM) celebrated 100 years of doing business in Indonesia in 1998, including 30 years as a production-sharing contractor, 20 years as a producer of liquefied natural gas and 10 years as a producer of liquefied petroleum gas.

ExxonMobil has concentrated on two major projects in Indonesia since 2005: the Cepu oil and gas block in East and Central Java and the off-shore Natuna D-Alpha block.

In the first quarter of 2008, the government announced that it had terminated ExxonMobil's rights to develop the 46 TSCF off-shore Natuna D-Alpha gas field and appointed state oil company Pertamina to run the project. The government said ExxonMobil failed to show sufficient progress in developing the field. ExxonMobil officials pointed to their expenditure of approximately \$400 million for exploration activities and asserted its contract gave the firm the right to an extension until 2009. Industry analysts generally share the opinion that Pertamina has neither the financial nor technical expertise to develop the Natuna field on its own. EM executives say they remain committed to a joint partnership with the GOI on the Natuna project,

according to public and media statements by the company.

In March 2006, ExxonMobil and Pertamina signed a joint operating agreement (JOA) for the Cepu Banyu Urip oil and gas block. Production is likely to start in late 2008, according to company press statements. EM believes the Banyu-Urip field has an estimated resource base in excess of 300 million barrels of oil and significant volumes of gas. ExxonMobil proposes a \$2.6 billion capital investment to fully develop the block. The company estimates peak crude oil production will be 171,000 bpd. Major gas supplies could be available for sale to meet existing shortfalls in East and Central Java. The company estimates the project will generate annual gross revenues between \$700 million and \$1.2 billion at peak production.

In 2005, Pertamina and ExxonMobil signed a new cooperation contract for the Cepu block, where each holds a 45 percent interest in the block. Previously EM held a 100% participating interest under a PSC awarded by Pertamina in 1990. The March 2006 JOA resolved a disagreement over operatorship with EM securing the lead to develop the project and Pertamina executives playing key roles.

In North Sumatra, ExxonMobil's natural gas operations include the Arun, Pase, South Lhoksukon, and North Sumatra Offshore fields, which supply gas to the Arun LNG plant. Gas supplies from the field is declining and not sufficient to meet export commitments and supply the local fertilizer industry in Sumatra. The government has requested that ExxonMobil divert some of its production from elsewhere in Indonesia to supply the

fertilizer plants even at the cost of the GOI having to purchase LNG cargoes from the world spot market to meet its contractual export commitments.

In April 2006, ExxonMobil divested its 50% participating interest in A-Block in the Madura Strait to a consortium of Indonesian, British, and Japanese firms. The company also sold its 68 percent interest in another Madura Strait PSC to Husky Energy in 2004.

### BP

With more than three decades of operating history in Indonesia, BP has become one of the largest foreign investors with a cumulative capital investment to date of over US\$5 billion. BP has business interests upstream, downstream, and in the chemicals sector and employs over 1,000 Indonesian nationals.

BP's operating assets offshore North West Java cover 8,300 square kilometers, from north of Cirebon to the east to Kepulauan Seribu to the west. BP West Java has been the major gas supplier to state-owned electricity company PLN since 1993, enabling PLN to generate electricity for the Greater Jakarta and West Java areas. BP West Java supplies gas also to gas company PGN and fertilizer producer PT Pupuk Kujang.

The Tangguh LNG Project is a major multinational development, with a lifespan of more than 30 years, to produce the natural gas fields in the remote Bintuni Bay area of Papua Barat. The gas reserves were discovered in the mid-1990s with proved reserves of 14.4 TSCF. It is operated by BP Berau Ltd. and will begin its operation towards the end of 2008 with

deliveries to customers likely to begin in early 2009.

BP is involved in VICO Indonesia through its joint venture with ENI. VICO operates the Sanga-Sanga Production Sharing Contract (PSC) and employs more than 1,000 nationals

In chemical business, BP has a 50/50 joint venture with Mitsui in PT AMI which produces PTA (purified terephtalic acid), feedstocks for fiber / string and also polyesther bottling industries. BP also produces and markets lubricant under the Castrol brand.

## **ConocoPhillips**

ConocoPhillips has had a presence in Indonesia for more than 40 years. It has focused in two core areas: the South Natuna Sea and onshore South Sumatra. It has 11 exploration and production licenses comprising roughly 14.5 million gross acres. The company operates nine Production Sharing Contracts (PSCs), four of them offshore: South Natuna Sea Block B, Ketapang, Amborip VI and Kuma. The remaining five PSCs are onshore: Corridor TAC (technical assistance contract), Corridor PSC, South Jambi B, Sakakemang JOB (jointly operated) in South Sumatra and Warim PSC in Papua.

ConocoPhillips holds a nonoperator interests in the Banyumas PSC onshore Java. In 2006 and 2007, the company sold its interests in the Block A PSCs in North Sumatra and was awarded the Amborip VI PSC in the Arafura Sea and Kuma Block in Makassar Straits.

ConocoPhillips is the largest supplier of pipeline gas in Indonesia through the South Sumatra pipeline and West Natuna

pipeline. The company owns and operates 621 miles of onshore and offshore natural gas pipelines that deliver ConocoPhillips's South Sumatra natural gas to market, including the Grissik-to-Duri and Grissik-to-Singapore pipelines. Meanwhile, natural gas from Block B is sold via two long-term contracts. In the first contract, ConocoPhillips is a participant in the West Natuna Gas Supply Group (WNG). WNG jointly markets natural gas from fields in three South Natuna Sea PSCs, including Block B, to SembGas in Singapore. The second contract is solely supplied with natural gas from Block B and provides deliveries to Petronas in Malaysia.

In August 2003, ConocoPhillips began supplying natural gas from its south Sumatra Corridor PSC to Singapore's PowerGas, via the Grissik-Batam-Singapore gas pipeline. The company has also supplied natural gas to Singapore's Sembawang Gas from its West Natuna gas fields since 2001 and to Petronas' Duyong Complex offshore Malaysia from South Natuna Sea Block B since August 2002. ConocoPhillips has been a major player in the pipeline gas business since 1998, when it began supplying gas from the South Sumatra Corridor Block PSC to the Chevron-operated Duri steamflood in Central Sumatra.

ConocoPhillips holds a 40 percent operating interest in the offshore Block B PSC, South Natuna Sea. The Belanak floating production, storage and offloading (FPSO) project at the Block B PSC started oil production in December 2004. The FPSO has a capacity to process 100,000 bpd of oil and 430 million cubic feet of gas per day. Natural gas production from the field is exported via pipeline to Singapore and Malaysia.

In offshore East Java, ConocoPhillips has an operating interest in the Ketapang block. The company believes the block has significant oil potential and plans an additional 5 wells in 2006. Malaysia's Petronas has an equal, non-operating interest in the block. ConocoPhillips plans to drill and invest over \$3 billion in projects in the Natuna Sea and Ketapang over the next 4 years.

ConocoPhillips is also a major player in the \$900 million South Sumatra to West Java gas development project. The project includes a 660-kilometer pipeline from ConocoPhillips Subang gas field in the Corridor Block to the state-owned electricity utility PLN gas-fired power plants in West Java. The company signed a gas sales agreement in August 2004 with state gas company PGN for 2.3 TSCF of gas to supply industrial customers in West Java and Jakarta over a 17 year period commencing 2007. Gas supply will come from the Suban gas field on Corridor Block PSC, South Sumatra and will be transported via the South Sumatra-West Java pipeline.

#### Amerada Hess

Amerada Hess consolidated its holdings in Indonesia and sold most of its Indonesian assets during 2002-2003. Amerada Hess' present assets in Indonesia are a 75 percent operating interest in Pangkah PSC and a 25 percent working interest in the Jambi Merang JOB. It produced approximately 4,000 boepd in 2006.

Amerada Hess has focused its operations in Indonesia on the development of the Ujung Pangkah gas field located in the Madura Strait, offshore East Java. The company is also constructing an offshore well head platform and an onshore gas processing facility in Gresik. Amerada

Hess plans to pipe gas from the Ujung Pangkah gas field to PLN's Gresik power plant. In December 2004, the company signed a 400 BSCF gas supply contract with PLN for 20 years starting at the end of 2006.

#### Medco

Indonesia's largest private oil company, Medco began exporting crude oil in 2000. It also formally changed its name to "PT Medco Energi Internasional Tbk." at that time. Medco is 50.7 percent owned by Encore International Ltd, which is affiliated with the Panigoro family. On January 2005, Encore signed conditional sales purchase agreements to buy out (Thai) PTTEP's 40% share and Cumin Limited's 19.9% percent share in New Links Energy Resources. Encore is now the sole shareholder of New Links. In 2005, Medco launched a secondary public offering, which increased public investors' shareholding in Medco up to 42.6 percent. Medco, through its subsidiaries, owns 15 oil and gas blocks throughout Indonesia, 9 of which are in production, while the rest are in the exploration phase.

Medco's production remained steady in 2006 at 56,367 bpd, though down from 2006. An ongoing production decline in Medco's largest fields, Kaji Semoga in Rimau PSC, South Sumatra, is the primary reason for drop off from 2000-2002. Medco plans to utilize waterflood optimization and enhanced oil recovery (EOR) to slow down the decline rate in its Sumatra fields. Medco's proven oil reserves now stand at 99 million barrels.

In late 2003, Medco assumed the sole risk in exploration drilling in Jeruk in the Sampang PSC. They struck oil in 2004. Other interest holders in the PSC,

Singapore Petroleum Company and Cue Energy, decided to reinstate their rights to the Jeruk field at that time.

In August 2004 Medco completed its takeover of Novus Petroleum Limited, a listed Australian oil and gas company with assets in the Middle East, Australia, U.S. and Indonesia. Through the acquisition, Medco gained interests in two Indonesian producing fields, Brantas and Kakap. Shortly thereafter, Medco began consolidation and shed some of Novus' assets. The company sold Novus' Pakistani, U.S., and Australian assets, as well as 18 percent and 6.25 percent of Brantas and Kakap PSCs in Indonesia.

The company believes its future lies in natural gas development. Medco's proven gas reserves stand at 267.6 BSCF. Medco's gas production more than doubled to 192 mmcfd in the period from 2002 to 2004, before dropping back to 127.2 mmcfd during 2006. LPG sales also went from zero in 2003 to 100.1 MTD in 2006.

In addition to gas blocks in south Sumatra, Medco's Exspan Tomori Sulawesi holds a 50 percent operating stake in the Senoro-Toili JOB with PT Pertamina. The block has estimated natural gas reserves of 2.5 TSCF. In January 2006, Medco shipped its first oil from the Senoro's Tiaka field to Pertamina's Plaju refinery.

In July 2005 Medco entered into an Exploration Joint Venture Agreement with the U.S.-based Anadarko Petroleum's Indonesian subsidiary. Under the agreement Anadarko will provide \$80 million over three years in exchange for up to 40 percent interest in Medco's exploration assets. Medco also acquired

100% of the Sembakung Technical Assistance Contract (TAC), a mature producing field in Perkasa Equatorial Sembakung and signed a PSC agreement with Libya's National Oil Company for the Area 47 concession, Northwest Libya. In 2006, Medco plans \$300 million in capital expenditures to continue with its acquisition strategy, of both domestic and international assets.

#### **EMP**

Energi Mega Persada (EMP) is an active producer, developer and explorer in the upstream oil and gas sector. It was incorporated in 2001 and listed on the Jakarta Stock Exchange in 2004.

The company became embroiled in controversy in May 2006 when a mudflow began from a wellhead at their Brantas PSC in East Java. The company contends that unrelated seismic activity caused the wellhead blow out, not negligent drilling practices, as some community activists and NGOs charged. Roughly 50,000 people have been displaced and 30 factories have been forced to shut down, according to government information. The mudflow has caused approximately Rp. 7.3 trillion (\$797.8 million) in infrastructure damage through 2007, according to GOI estimates. In April 2007, the GOI said it set aside Rp 2.5 trillion (\$273 million) in the state budget to repair infrastructure damaged by the mudflow. It said it will seek full repayment from Lapindo, although the government later relieved Lapindo from full responsibility by declaring the mudflow the result of an earthquake 300 km away from the drilling site. Geologic experts say the mudflow may continue for years or perhaps even decades.

According to the company, Lapindo has been paying Rp 2.5 million per year (\$273) in rental assistance to each family displaced and Rp 300,000 per month (\$33) in living costs to each person in the impact area. Lapindo announced plans to end all such payments on May 1, 2008, although they continue to some families that have not yet been resettled.

In November 2006 the Capital Market Supervisory Agency disallowed EMP's proposed deal to sell its interest in Lapindo to Freehold Group, an independent company incorporated in the British Virgin Islands.

In July 2007 EMP deconsolidated Lapindo Brantas Inc, Kalila Energy Limited, and Pan Asia Enterprise from EMP's consolidated financial statements.

In March 2008 through a series of financial transactions approved by GOI regulators, EMP diluted its stake in Lapindo Brantas Inc to 0.01% by selling Lapindo to Lyte Ltd of Jersey, UK. By this action, EMP may no longer face significant potential liability for the mud flow.

Soon after incorporation in 2001 EMP embarked on a series of acquisitions. In 2003 EMP acquired Kondur Petroleum, operator of the Malacca Strait PSC with a 34.46% working interest. In 2004, it bought PT Imbang Tata Alam (ITA) which had a 26.03% working interest in the Malacca Strait PSC. Kondur and ITA together hold a 60.49% working interest in the PSC. In March 2004, it bought Kalila Energy Ltd. (KEL) and Pan Asia Enterprise Ltd. (PAN) which controlled 100% of Lapindo Brantas. Lapindo has a 50% working interest and is operator of the Brantas PSC. In August 2004 EMP

acquired a 100% working interest in the Kangean PSC through EMP Exploration (Kangean) Ltd. and EMP Kangean Ltd. EMP Kangean Ltd is the operator of the PSC. EMP bought THP for \$308.6 million. THP owned five PSCs.

In May 2007 EMP concluded a \$720 million deal with Japan's Mitsubishi and Japan Petroleum Exploration Co. Ltd to give the two firms an aggregate 50% working interest in the Kangean PSC. EMP retained a 50% interest in the Kangean PSC. In June 2007 EMP established strategic alliance to cooperate on gas exploration in the Suci Block in East Java with PT Indelberg Indonesia Perkasa and Pertamina in East Java.

In April 2008 EMP bought the Tonga PSC in North Sumatera for \$11.8 million. The company estimates that Tonga PSC has up to 90 million boe.

### **CNOOC**

The China National Offshore Oil Company (CNOOC) produced 57,000 bpd in 2006. CNOOC's holdings now include an operating 65.34% interest in the Offshore South East Sumatra PSC, a 36.72 percent interest in the Offshore Northwest Java PSC, a 25 percent interest in the West Madura PSC offshore East Java, a 50 percent interest in the Poleng TAC in East Java, and a 39.51 percent interest in the Malacca Strait PSC. CNOOC's Indonesian operation had net proved reserves of 155 million boe, accounting for approximately 7 percent of total company reserves. In 2004, the company produced and 81.5 thousand bpd of oil and 18.8 BSCF of gas.

CNOOC's Indonesia strategy is to tap into the export market as well as get more

involved in the domestic natural gas industry. CNOOC entered the LNG export business when it bought a 12.5 percent stake in the \$3 billion Tangguh LNG project in late 2002.

Production in CNOOC's South East Sumatra PSC continued to decline over the past 4 years. Main oilfields Cinta and Widuri are already 30 years old and are steadily declining. However, the company is optimistic that it will be able to maintain production level through the development of marginal fields and new gas fields in the area. In April 2005, CNOOC received increased financial incentives from the government for its 6 marginal fields. CNOOC secured a gas sales agreement with PLN in 2004 to supply 80 billion BTU to PLN's proposed Cilegon Power plant in West Java starting in 2006 and lasting 12 years. They will supply the gas mainly from the newly developed Zelda and Banuwati fields in the Southeast Sumatra PSC.

# **Crude Oil Marketing**

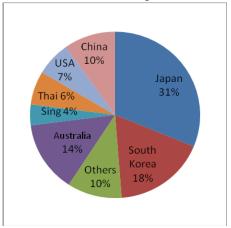
Indonesia, through Pertamina, BP Migas and its foreign partners, sells crude oil using the Indonesia Crude Price (ICP) formula. Indonesian crude is generally low sulfur and waxy. Indonesia's representative Minas crude (often referred to in marketing terms as Sumatra Light Crude or SLC) produced in Central Sumatra has an American Petroleum Institute (API) gravity of 34.5 degrees at 60 degrees F and a sulfur content of between 0.06 percent and 0.10 percent by weight.

Effective October 1, 1999, Pertamina changed the ICP pricing formula for official export prices of Indonesian crude. The ICP formula has three components:

the Asian Petroleum Price Index (APPI), the Rim Intelligence Company price, and the Platts price. The APPI component is derived from twice weekly APPI price assessments adjusted by a basket of regionally traded crude oils (including Indonesian Sumatra Light Crude and Malaysian Tapis) using a 52-week moving average. Pertamina lowered the portion of the APPI panel quota from 33.3% to 20.0% and increased the portion of the spot assessments of Platt and RIM to 40.0% each. The purpose of the adjustment was to better reflect world prices through more emphasis on the spot market. The Ministry of Energy and Mineral Resources reviews the oil pricing formula semi-annually.

Asian countries are the largest markets for Indonesian crude. Japan accounted for 31% of Indonesian crude oil exports in 2006, followed by South Korea (18%), Australia (13.8%), China (10%), and the United States (6.6%). Indonesia's overseas markets have exhibited declining sales volumes since 2002. Exports declined 15% by volume from 2005.

**Indonesia 2006 Crude Export Destinations** 



Pertamina has an office in Singapore through its wholly owned Hong Kongbasedsubsidiary Pertamina Energy Trading (ex-Perta Oil). The company promotes and facilitates trade in crude oil and fuel between Singapore and Indonesia, offers logistical services to Pertamina, and represents Pertamina's interests.